Central Alaska Network Highlights

Happenings

AK Conference on Alaska's Amphibians - 3/30-4/1, Juneau
Steve Fancy to Visit AK Region - 4/12, AKSO, Fairbanks
Glacier Bay Science Symposium - Oct 26-29, Juneau

Vascular Plant Inventories

Eighty-two sites were surveyed in WRST for the vascular plant inventory

Ten new species have been documented for the park.

Three of these were not on the expected list for specimens. More species are likely to be added to these lists after final lab work and taxonomic identification.

Freshwater Fish Inventories

Freshwater fish were sampled at 31 sites in Denali National Park and Preserve and included 20 lakes, nine creeks and two rivers. From this sampling:

Five species were documented for the first time in DENA.

Freshwater fish were sampled at ten sites in Wrangell-St. Elias National Park and Preserve at seven streams, two lakes and one estuary.

Eight identified species of fish were found; two unusual species of sculpin still need to be identified; and two of the identified species were documented for the first time in WRST.

Meterological monitoring in Denali NP&Pres.

Bird Work Completed

The final report for the Yukon-Charley Bird Inventory was completed and an accompanying web site developed (*http://www.nps.gov/yuch/Expanded/key_resources/birds/inventory/inventory.htm*). An interactive tool for visitors and staff is included to determine which bird species can be found, based on the ecology of the Preserve. The site also provides life history and other information on bird species in the Preserve.

Taken from CAKN AARWP 2004, Maggie MacCluskie

I&M Gallery

Photos and other products from the Alaska Region Biological Inventories

-WAN Plant Inventory 2003.
AKNHP Photo. M. Carlson

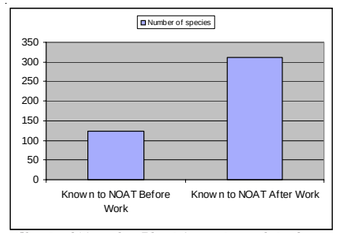


Chart of Vascular Plant Inventory data from NOAT (before and after work)

A small sample of the Vascular Plant Inventory data from NOAT (Note the amount of new species)

Family	Genus	Species	Taxonomic/Floristic notes	Spececol
Adiantaceae	Cryptogramma	stelleri	AKNHP ranking G5S2S3, minor NW range ext., new to NOAT	growing on moist, shaded limestone face under alders
Adoxaceae	Adoxa	moschatellina		lush herbaceous vegetation growing on surface of ancient village site, disturbed and nutrient-enriched
Apiaceae	Bupleurum	triradiatum	new to NOAT	lush herbaceous vegetation growing on surface of ancient village site, disturbed and nutrient-enriched
Apiaceae	Bupleurum	triradiatum	new to NOAT	growing on steep, E-facing cobble cutbank of ancient terrace, vicinity of ground squirrel burrow
Apiaceae	Cnidium	cnidiifolium		growing on steep, E-facing cobble cutbank of ancient terrace, vicinity of ground squirrel burrow
Aspleniaceae	Dryopteris	fragrans		steep, dry, S-facing dryas slope above river
Aspleniaceae	Woodsia	glabella		growing in crevices on S-facing limestone outcrops
Aspleniaceae	Woodsia	ilvensis	new to NOAT	boulder slopes, wet seepage meadows, and moist dryas heath, growing among boulders
Aspleniaceae	Woodsia	ilvensis	new to NOAT	steep, dry, S-facing dryas slope above river
Asteraceae	Antennaria	friesiana		moist graminoid-Salix-Dryas tundra with scattered sedge tussocks
Asteraceae	Antennaria	friesiana		S-facing, moist meadow at limestone-igneous rock contact, male and female plants
Asteraceae	Antennaria	friesiana	new to NOAT	SE-sloping rocky dryas fellfield
Asteraceae	Arnica	angustifolia		active river floodplain, medium-aged poplar stand and active sand-gravel bar, growing in poplar understory
Asteraceae	Arnica	angustifolia		open willow-heath vegetation on gravel bar
Asteraceae	Arnica	griscomii	new to NOAT	lake shore gravel beach ridges, active beach gravels and adjacent ancient, sparsely vegetated ridges, growing among small Dryas patches on older beach surface
Asteraceae	Arnica	griscomii	new to NOAT	prominent limestone knob above floodplain, rocky dryas-heath tundra with scattered shrubs, growing on W-facing heath meadow
Asteraceae	Artemisia	arctica	new to NOAT	S-facing, moist meadow at limestone-igneous rock contact
Asteraceae	Artemisia	arctica	new to NOAT	growing in creek floodplain in moist gravel and sand bars
Asteraceae	Artemisia	arctica	new to NOAT	understory of medium aged balsam poplar stand at margin of floodplain, shaded, moist, sandy soil
Asteraceae	Artemisia	furcata	new to NOAT	ridgetop dryas fellfield, igneous rock substrate
Asteraceae	Artemisia	furcata	new to NOAT	dryas fellfield heath on igneous bedrock slope

Alaska Region
Inventory and Monitoring Program

May 2004

The I&M Outlook

...a newsletter of the Alaska Region Inventory and Monitoring Program

In this edition:

Sara's Corner

Notes from the Alaska Region

This edition of the I&M Outlook *is dedicated to presenting a summary of the Biological Inventories. This significant effort yielded results that we could not have imagined back in April 2000, when the Scoping Meeting was held in Anchorage. This unique 5-year opportunity gave the Alaska Region a window to the lesser known species in the National Parks. Thousands of bird, plant, mammal, amphibian, and fish species were located and identifed, and the data recorded in national databases to guide future decisions by park managers and scientists. We attracted great researchers, leaders in their fields, to seldom-visited places in the National Parks, and as a result, have a far greater knowledge of our nation's species distribution and biodiversity. The text in this newsletter comes from the Administators Annual Report and Work Plans, and the highlights were submitted to Congress. As we look forward to the Monitoring work to come, I invite you to read through these reports, and to take a minute and look back at the great things the parks were able to accomplish. We've really come a long way, and should be extremely proud of ourselves, our parks, and our colleagues.*

Sara Wesser is the Regional Coordinator of the Inventory & Monitoring Program in Alaska

Next edition -
Vital Signs Monitoring

Biological Inventories Wrapping Up

The Biological Inventory phase of the Inventory & Monitoring Program are winding down this year. This effort took five field seasons to complete baseline inventories of vascular plants and vertebrate species across the sixteen National Parks in Alaska. Many species, previously unknown to the parks, were collected and mapped. The inventories have added a signaificant number of new locality records to many rare and little-known species like these of the tiny shrew *Sorex yukonicus* . Researchers, armed with the high-quality data from these inventories, now have a reliable set of baseline information are able to look towards monitoring to detect population trends and other vital information to guide management decisions about our park resources.

Known tiny shrew locations in Alaska

Arctic Network Highlights

Small Mammal Inventories-

Small mammal inventories during the 2001-2003 field seasons have resulted in major range extensions for several small mammals. Collected specimens are additionally being utilized by scientists in a groundbreaking study of parasitology and small mammal evolution. The small mammal inventory of ARCN parks was continued under the direction of Dr. J. A. Cook at Idaho State University (ISU) and the University of New Mexico through a task agreement with the Great Basin CESU and an interagency agreement with the USGS Fort Collins Science Center.

The tiny shrew (*Sorex yukonicus*), (one of the most poorly documented small mammals in North America) was found in BELA, GAAR, and CAKR.

Major range extensions were also documented for the barren ground shrew (*S. ugyunak*) (collected for the first time in all of the Arctic Parks) and the pygmy shrew (*S. hoyi*) which was found for the very first time in CAKR and GAAR. Major extensions for the known ranges of several other small mammal species also occurred due to our 2001-2003 field seasons.

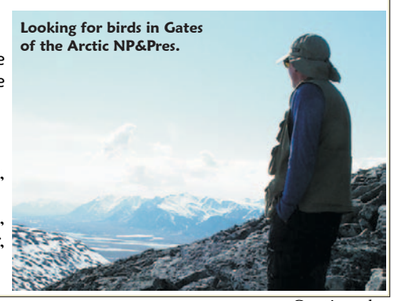
Arctic Montane-Nesting Shorebird Surveys-

Montane-nesting bird surveys in ARCN have resulted in the documentation of over 100 montane-nesting bird species during 2001-2003. Sixteen species were newly documented for the Parks through this effort. Despite the obvious importance of Arctic Parks to regional, national, and international populations of montane-nesting birds, particularly shorebirds, information on species distribution and abundance is limited or non-existent for most geographic areas of the park.

An interagency agreement was continued with Robert E. Gill and T. Lee Tibbitts of the USGS-Alaska Science Center to conduct inventories of birds within the Arctic Network.

More than 100 montane-nesting bird species were found because of fieldwork in 2001-2003. The following species were documented by field crews for the first time:

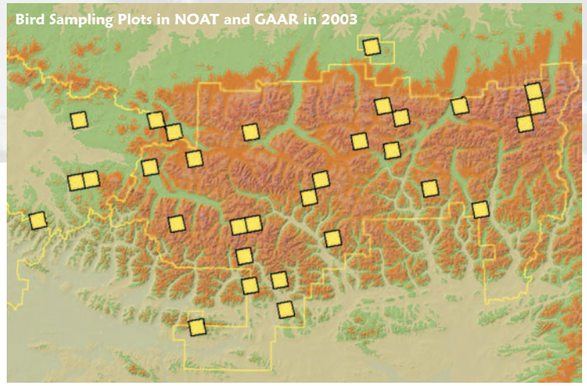
Buff-breasted Sandpiper and Hoary Redpoll in CAKR;
Common Merganser, Parasitic Jaeger, Horned Lark, Bluethroat, and Gray-crowned Rosy-finch in KOVA;
Bufflehead , Common Merganser, Red-tailed Hawk, Hudsonian Godwit , Surfbird , Red Knot, Pomarine Jaeger, Hermit Thrush and Pacific Golden Plover in NOAT.



Looking for birds in Gates of the Arctic NP&Pres.

Continued...

Frequent and abundant range extensions were also documented in this very successful effort to study a poorly known habitat in the Arctic.



Vascular Plant Inventories:
The inventory field crews continue to discover (at an impressive rate) species that are new to our National Parks, showing the success that these inventories have had. Vascular plant surveys documented 305 new species in Cape Krusenstern NM. Other park results are just as impressive:

131 new to KOVA, 32 new to BELA, 151 new to NOAT, and 168 new species to GAAR.

Five species were found in the Arctic Parks that are new to Alaska or North America. Many new plant records for each of the parklands included many rare species.

In Cape Krusenstern National Monument , which was floristically unknown prior to our survey, we documented 305 species that were new to the Monument and include seven rare plants *Potentilla fragiformis* (new to North America), and *Dupoa labradorica* (new to Alaska)

In Kobuk Valley National Park we documented 131 species that were new to the park, including five new rare species, and a second population of *Saussurea triangulata*, recently found to be new to North America during a previous survey in the area.

Bering Land Bridge National Preserve documented 32 new records for the park including one new rare species, and additional populations of *Dupoa labradorica* (new to North America).

In Noatak National Preserve we added 151 new records to the park's expected species list, including 11 new rare species.

In Gates of the Arctic National Park and Preserve, we swelled the Park's known plant list with 168 new species including 12 new rare plants, and included *Draba pauciflora* and *Festuca edlundiae*, both of which are new to Alaska.

Additionally, numerous range extensions, of more than 150km, within Alaska, were also documented for some rare and many more widespread species. *Taken from the ARCN AARWP 2003, Diane Sanzone.*

Southeast Alaska Network Highlights

Vascular Plant Inventories:
At SITK, confirmation of the establishment of several introduced plant species lends additional support to the growing public concern about the invasion of exotics into national parks.

Also confirmed as present at SITK was a bluegrass (*Poa laxiflora Buckl.*) listed by the U.S. Forest Service as a Sensitive Species for the Tongass National Forest and known from fewer than 15 sites in Alaska.

Sampling at GLBA and KLGO turned up significant range extensions for several species, most of which are species of global and state conservation concern.

Two previously undocumented exotics were also reported in KLGO. Plant crews also focused field sampling on the Alsek River corridor, a region of the park with few botanical collections and a much drier, continental climate and habitat than the rest of the park.

Approximately 30 species were added to the GLBA park list of vascular plants documented as Present. Along with the 87 new records for the park documented in Year 1 of the inventory, this brings the total number of vascular plants known to be present in GLBA to 568.

Marine Fish Inventory
A total of 100 marine and estuarine fish species were documented for GLBA,

23 species in SITK,
11 species in KLGO, and
31 species in Wrangell-St. Elias National Park and Preserve (not in the SEAN, but in the same coastal group).

Between 59 and 85 percent of the total marine fish species present were sampled. This represents significant progress toward adequately documenting species composition in these extremely poorly known habitats in which it is very costly to conduct field activities. Additionally, they combined these data with historical records and prepared an annotated species list of 160 marine and estuarine fishes documented to occur in GLBA.

Bird Inventory
Breeding land-birds and water-birds were sampled in 2003 at KLGO. A USGS-BRD avian ecologist designed the survey protocol based on two established Off-Road Breeding Birds Survey routes. Intensive surveys were conducted in spring, with waterbird surveys continuing at 2-3 week intervals throughout the summer and fall.

Preliminary findings indicate that at least 107 bird species were observed; confirming the presence of some expected species and one new species, dunlin (Calidris alpina) to the park species list.

Amphibian Inventory
The Opportunistic Amphibian Inventory documented several new species to the parks. The northwestern salamander (*Ambystoma gracile*) was observed along the outer coast of Glacier Bay in 2000, and a single rough-skinned newt (*Taricha granulosa*) was documented on a small island just off the coast of Sitka NHP by park Resource Chief Gene Griffin's daughter Kathryn.

These, and other finds, represent significant range extensions for this poorly understood taxonomic group.

The project has added significant location information to the known range for western toads (*Bufo boreas*) in both KLGO and GLBA. Several reports of Columbian spotted frogs (*Rana luteiventris*) on the Canadian side of the Chilkoot Trail in KLGO were submitted, but it appears that this species may not occur on the US side of the pass.

This inventory, devised by the SEAN, also tracks observations and collections throughout the rest of the National Parks in Alaska. To date, over 1600 individual amphibians have been observed at more than 79 locations. Additionally, a number of anecdotal reports from Gustavus and Skagway point towards a rapid decline of western toad numbers in the areas, though the cause(s) remain undiscovered. More information may be found in the Amphibians of Alaska' National Parks webpage: *http://www.nature/nps.gov/im/units/akro/Amphibians/ak_amphibians.htm Taken from the SEAN AARWP 2003, Lewis Sharman, Network Lead*

Southwest Alaska Network Highlights

Vascular Plant Inventories:
A number of Vascular Plant species found in KEFJ represented significant range extensions or were taxa of conservation concern (Heritage global "G" and state "S" ranks are included in parentheses). These include:

Papaver alboroseum (G3G4-S3). New locations were added for this rare pink poppy, previously known in the Park from the vicinity of Exit glacier. Although known from an increasing number of sites, this species is still a relatively rare endemic of the mountains of southern Alaska, extending into Kamchatka to the west and to a few locations in northern British Columbia to the east.

Carex lenticularis var. dolia (G5T3Q-S3). This sedge is principally known from south coastal Alaska where it is known from scattered locations from Southeast AK to the Aleutians. It is disjunct to several locations in the western US and Canada where it is rare and of conservation concern. The collections from Kenai Fjords are not unexpected and fill in the distribution of this rare sedge.

Cochlearia cf sessilifolia (G1Q-S1). This rare scurvy grass is known from only three locations worldwide (Kodiak, Seward, and Valdez) but questions remain about the taxonomic status of this species. We made several collections at Beauty Bay which resemble this rare species although the plants were immature and determinations are tentative.

Botrychium lunaria - several collections were made of this moonwort to be analyzed by Mary Stensvold and Don Farrar at Iowa State Univ.

Alaska has been shown to be an important center of diversity for this genus and previous collections of this species complex have proven to be new taxa.

Small Mammal Inventory
The first documented records from LACL of montane shrew, little brown bat, and ermine. The discovery of the singing vole at Turquoise Lake constitutes a new species for the Park and a major range extension southwestward along the Alaska Range.

Tiny shrews from near the southwest corner of Lake Clark is only the second locality record of this species in LACL, the first being a single specimen (in Moscow University, Russia) from Turquoise Lake.

These plus 5 other tiny shrews captured in Kobuk Valley National Park this summer, raised the total number known to science to 37 specimens. The total number of documented small mammals in LACL to 17 of 23 potential species, or 74% coverage.

Two shrews (cinereus shrew, montane shrew) and a murid rodent (northern red-backed vole) were the most frequently sampled species (385, 109, and 238 specimens, respectively), comprising over 87% of all specimens collected.

A total of 841 small mammal specimens (excluding embryos) comprising 16 species was archived from LACL. *Taken from the SWAN AARWP 2003, Alan Bennett*

This is the semi-annual newsletter of the National Park Service, Alaska Region, Inventory and Monitoring Program. Questions, comments or items for publication, may be sent to:
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